Sunoco History

Purpose and Values





Facilities



More Sunoco Weh Sites



About Sunoco

Sunoco, Inc., headquartered in Philadelphia, Pa., is one of the largest independent U.S. petroleum refiner-marketers in the United States. Sunoco:

Principal Office

Ten Penn Center 1801 Market Street Philadelphia, PA 19103-1699 (215) 977-3000

- operates five domestic refineries with approximately 730,000 barrels per day of crude oil processing capacity;
- markets gasoline under the Sunoco[®] brand through approximately 3,500 Sunoco outlets in 17 states from Maine to Virginia and west to Indiana;
- sells lubricants and petrochemicals worldwide;
- operates petroleum and crude oil pipelines and terminals;
- produces nearly two million tons per year of metallurgical-grade coke;
- employs approximately 11,000 men and women dedicated to bringing quality products and services to the marketplace.













Sunoco Facilities

CHEMICAL PLANTS Brandenburg Frankford

> **COKE PLANTS** Indiana Harbor Vansant

> > OTHER **REFINERIES** Philadelphia Toledo Tulsa Yabucoa

NEDERLAND **TERMINAL**

MARCUS HOOK REFINERY

Sunoco, Inc. P.O. Box 426 Marcus Hook, Pennsylvania 19061

Phone: 610-859-1038 610-859-1183 Fax:

e-mail: Marcus Hook Refinery

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NUMBER OF EMPLOYEES AND PRODUCTS MANUFACTURED

The Marcus Hook Refinery has approximately 700 employees and can process 175,000 barrels a day of crude oil into fuels - including gasoline, aviation fuel, kerosene, heating oil, residual fuel, propane and butane - and petrochemicals. The major petrochemicals are benzene, toluene, xylene, cyclohexane, propylene, ethylene, and ethylene oxide; these are sold to chemical companies, which use them to make plastics, antifreeze, carpets, pillows, detergents, carbonated beverages and dry ice, among other products.

BRIEF HISTORY

Since 1902, the Marcus Hook Refinery has been on the cutting edge in the petroleum industry, with many firsts to its name, including the world's first large-scale, commercial catalytic cracking plant in 1937 that ushered in a new era in petroleum refining.





Purpose and Values

Directors and Officers



Facilities





Sunoco History

The Beginnings in Ohio



Sunoco got its start on March 27, 1886, when Joseph Newton Pew and Edward O. Emerson, partners in The Peoples Natural Gas Company in Pittsburgh, Pa., made a bold move to diversify their

business. Looking to the promising new oil discoveries in Ohio and Pennsylvania, the partners paid \$4,500 for two oil leases near Lima, Ohio. Within a few years the company had acquired pipelines, leases, storage tanks -- and was emerging as one of Ohio's leading suppliers of crude oil. On March 17, 1890, it became The Sun Oil Company of Ohio and was producing, transporting and storing oil as well as refining, shipping and marketing petroleum products. Through the purchase of the Diamond Oil Company in 1894, Sun acquired a refinery in Toledo, Ohio, and began operations there in 1895. The partnership ended in 1899, when Mr. Pew bought out Mr. Emerson's interest.

In May 1901, the company headed by Mr. Pew was incorporated in New Jersey as Sun Company and began securing leases and crude oil in the new Spindletop field in Texas. With business growing, Mr. Pew in 1901 purchased 82 acres in Marcus Hook, Pa., as the site for a second refinery to process crude oil shipped by tanker from Spindletop. Marcus Hook went on stream on March 20 that year.

In 1912, the year after Sun Company celebrated its 25th anniversary, Joseph Newton Pew died and was succeeded as President by his 30-year-old son, J. Howard Pew, whose brother, Joseph N. Pew, Jr., became Vice President.

Years of Innovation

The Pew brothers pioneered innovation and expansion of the company. In 1916 they established Sun Shipbuilding and Dry Dock Company, a subsidiary that took the company into the shipbuilding business. In 1920 Sun opened its first service station in Ardmore, Pa., and then another in Toledo, Ohio. The name changed to Sun Oil Company in 1922 to better identify the company with its business. On November 12, 1925, Sun went public -- its stock appearing for the first time on the New York Stock Exchange.

Before the decade was over, Sun was in the oil field equipment business with the 1929 formation of Sperry-Sun, a joint venture with Sperry Gyroscope. One of the most dramatic events of the 1930s for the company -- and the refining industry -- took place when Sun placed on stream the world's first large-scale, commercial catalytic cracking plant in Marcus Hook in 1937.



The mining business attracted Sun in 1941, when Sun formed the Cordero Mining Company in Nevada to supply mercury for Sunoco motor oils. The metal proved vital during the World War II effort. So too did Sun Shipbuilding and Dry Dock Company --

which turned out 40 percent of all wartime tankers built or reconverted.

By 1947 J. Howard Pew was 65 years old and resigned as President, to be succeeded on March 18 of that year by Robert G. Dunlop. Mr. Pew remained a director, and his brother Joseph N. Pew, Jr., was named Chairman of the Board.

Expanding North and South

The company was expanding north and south by the 1950s. In Canada Sun started a 15,000 barrels per day refinery in Sarnia, Ontario, in 1953. And in Venezuela beginning in 1957 Venezuelan Sun Oil Company produced more than one billion barrels of oil from Lake Maracaibo before ceasing operations when the Venezuelan government nationalized Sun's holdings in 1975.

Back in the States, 1956 was the year Sun introduced the Custom Blending Pump, a novel system for dispensing a choice of several octane grades of gasoline from a single pump. It revolutionized the method of marketing gasoline, and a model of the pump is on display at the Smithsonian Institution.



Joseph N. Pew, Jr., son of the founder and Chairman of the Board, died in 1963. His brother, J. Howard Pew, became Chairman.

A bold venture began for Sun in 1967 in the Athabasca oil sands of Canada, with Sun's Great Canadian Oil Sands Limited subsidiary

completing its processing facility in northern Alberta. The plant had the capacity to produce 45,000 barrels per day of synthetic crude oil from the estimated 300 billion barrels of recoverable oil locked in the sands.

Sun Reshapes -- and Later Renames



Sun grew by merger in 1968. On October 25 Sun Oil Company and Sunray DX Oil Company, headquartered in Tulsa, Okla., merged to form a new Sun Oil Company. Two years later Robert G. Dunlop replaced J. Howard Pew as Chairman of the Board and H.

Robert Sharbaugh was elected President and Chief Operating Officer of the company. Having been based in downtown Philadelphia for many years, Sun Oil Company moved to a new headquarters building in St. Davids, Pa., in 1971. That year, on November 17, J. Howard Pew died -- having just celebrated his 70th year with Sun Oil Company.

Major restructuring reshaped the company in 1975, when it organized into fourteen operating units, two property

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companies and a non-operating parent company, and moved to a major new corporate headquarters in Radnor, Pa. H. Robert Sharbaugh, President and CEO of Sun Oil Company, was elected Chairman of the Board. Reflecting the diversification of the company, Sun Oil Company was renamed Sun Company in 1976. There were changes in management that year too with Theodore A. Burtis being elected President and Chief Operating Officer and Mr. Sharbaugh continuing as Chairman and CEO. In 1978, Mr. Burtis would take the post of CEO.

A Major Expansion

In a dramatic acquisition in 1980, Sun purchased the U.S. oil and gas properties of Texas Pacific Oil Company, Inc., a subsidiary of The Seagram Company, Ltd., for \$2.3 billion. At the time this was the second largest acquisition in the history of U.S. business. Also bought that year: Viking Oil Limited, owner of a 20 percent interest in promising production blocks in the North Sea. The year before, in 1979, Sun had also taken a wider position in coal by acquiring eastern reserves from Elk River Resources, Inc.



Sun sold Sperry-Sun in 1981 and Sun Ship in 1982. The latter ended the company's 65 years in the shipbuilding business. It was a new look in 1981 when the word SUN in blue block letters on a white sunburst became the identifying symbol of the company. Keeping its familiar Sunoco Diamond and DX symbols at

the pump, Sun intensified its marketing push in 1983 with the introduction of Sunoco ULTRA, the highest octane premium unleaded gasoline available from a major U.S. refiner.

The early 1980s brought expansion on a number of fronts. Internationally, Sun signed on to develop interests in the North Sea and offshore China. Domestic reserves were added with the acquisition of Exeter Oil Company, Victory Oil Company and interests of Petro-Lewis Corporation in 1984. The coal business grew too with the acquisition of Whitaker Coal Corporation in Kentucky in 1983. At the same time, responding to the market, Sun began to reduce its lube oil business.

On July 3, 1985, Robert McClements, Jr., President of the company, became CEO as well, with Theodore A. Burtis continuing as Chairman of the Board. The following year Mr. Burtis resigned that post, but remained a director. Mr. McClements took over as Chairman and Robert P. Hauptfuhrer was made President and Chief Operating Officer.

Focus on Refining and Marketing

In 1988 Sun's board approved a major restructuring of the company, disposing of all domestic oil and gas exploration and production through the distribution of Sun Exploration and Production Company, a wholly owned subsidiary, to the common shareholders of Sun Company, Inc., and focusing on the "downstream" part of the business -- refining and marketing.

The renewed focus on refining and marketing began immediately with the acquisition of Atlantic Petroleum Corporation, bringing to Sun another refinery, a network of

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service stations and a pipeline system. Six years later, the company acquired Chevron's Philadelphia Refinery, immediately adjacent to the former Atlantic facility, and set to work combining the two into a single, more efficient refining complex that was linked directly to the Marcus Hook Refinery, just 12 miles away.



In the early 1990s, the company moved its headquarters from Radnor to downtown Philadelphia and exited the international exploration business. In February 1991 the board elected Robert H. Campbell (formerly an executive vice president with the company) as President and Chief

Operating Officer. By the end of 1992 the board made Mr. Campbell Chief Executive Officer as well, with Mr. McClements still Chairman of the Board. Mr. McClements retired from that position in 1992, with Mr. Campbell replacing him.

Sun's strategic direction would now focus on the value added businesses: branded gasoline marketing in the northeastern U.S.; lubricants; chemicals; and logistics. Part of that new strategic focus called for divesting Sun's interest in the real estate business, a process that began in 1991, and in Suncor, the Canadian subsidiary, a process that was completed in 1995. Cordero Mining Company was sold in 1993 and Sun's international oil and gas production business was sold in 1996.



Sun's management made a major departure from tradition in 1996 when the board elected John G. (Jack) Drosdick President and Chief Operating Officer. The first Sun President ever to come to that position from outside the company, he had previously been President and COO of Ultramar

Corporation and had also served as President and CEO of Tosco Refining Company. Mr. Drosdick succeeded Mr. Campbell as Chairman, CEO and President following Mr. Campbell's retirement on May 4, 2000.

The steps taken by Sun in recent years have prepared the company to succeed in a new environment for the petroleum industry, and on November 6, 1998, the company's name was again changed to more clearly reflect its principal business. Having become one of the largest independent U.S. refiner-marketers, Sun Company, Inc. became Sunoco, Inc. -- a company with a history that spans half of the American experience, but one fully prepared for the 21st Century.



TABLE 4-1

EXPECTED WASTE TYPES AND MAXIMUM EXPECTED ANNUAL VOLUMES AT THE CONTAINER STORAGE FACILITY

EPA -			
Waste		Estimated Maximum	
Code	, Description	Volume (tons)	
	HAZARDOUS WASTE		
•	HABAKBOOS WASTE		
F003	Spent non-halogenated solvents:	50	
	Xylene, acetone, etc.	·	
F004	Spent non-halogenated solvents:	50	
	cresols, cresylic acid, etc.		
F037	Primary Sludge	10,000	
F038	Secondary Sludge	10,000	
K048	DAF Float	10,000	
K049	Slop Oil Emulsion Solids	5,000	
K050	Heat Exchanger Bundle Cleaning Sludges	5,000	
K051	API Separator Sludge	10,000	
K169	Crude Oil Storage Tank Sediment	20,000	
K170	Clarified Slurry Oil Tank Sediment	20,000	
K171	Spent Hydrotreating Catalyst	10,000	
D001-D043	Characteristics Wastes	10,000	
P022	Carbon Disulfide	50	
P110	Tetraethyl Lead	50	
U019	Benzene	100	
U052	Cresols	50	
U056	Cyclohexane	100	
U077	1,2 - Dichloroethane	50	
U125	Furfural	50	
U135	Hydrogen Sulfide	50	
U151	Mercury	50	
U154	Methanol	100	
U159	MEK	50	
U188	Phenol	50	
U220	Toluene	50	
U226	1,1,1 - Trichloroethane	50	
U239	Xylene	50	

Completed 4/6/92

CORRECTIVE ACTION STABILIZATION QUESTIONNAIRE

Completed by: Barbara Okorn, Hon Lee

Date: December 16, 1991

Background Facility Information

Facility Name: Sun Refining and Marketing Company

EPA Identification No.: PAD 980 550 594

Location (City, State): Marcus Hook, Pennsylvania

Facility Priority Rank: High

1. Is this checklist being completed for one solid waste management unit (SWMU), several SWMUs, or the entire facility? Explain:

For one SWMU. SMWU 96 has continuing releases to the environment.

Status of Corrective Action Activities at the Facility

- 2. What is the current status of HSWA corrective action activities at the facility?
 - () No corrective action activities initiated
 - (X) RCRA Facility Assessment (RFA) or equivalent completed
 - () RCRA Facility Investigation (RFI) completed
 - () Corrective Measures Study (CMS) completed
 - () Corrective Measures Implementation (CMI) begun or completed
 - () Interim Measures begun or completed
- 3. If corrective action activities have been initiated, are they being carried out under a permit or an enforcement order?
 - (X) HSWA Permit
 - () Operating permit
 - () Post-closure permit
 - () Enforcement order

- 4. Have interim measures, if required or completed [see question 2], been successful in preventing the further spread of contamination at the facility?
 - () Yes
 - () No
 - (X) Uncertain; still underway

CONTINUE TO QUESTION 5 ONLY IF THE FOLLOWING CONDITIONS ARE MET:

The facility ranks "High" on the National Corrective Action Prioritization System; AND

Interim Measures have not been initiated, or if initiated, have not been successful in preventing the further spread of contamination at the facility.

Facility Releases and Exposure Concerns

- 5. To what media have contaminant releases from the facility occurred or been suspected of occurring?
 - (X) Ground water
 - (X) Surface water
 - (X) Air
 - (X) Soils

- 6. Are contaminant releases migrating off-site?
 - (X) Yes; Indicate media, concentration and level of certainty. The facility admitted releases to the Delaware River. Releases to other media are undetermined at this time.
 - () No
 - (X) Uncertain
- 7a. Are humans currently being exposed to contaminants released from the facility?
 - () Yes
 - () No
 - (X) Uncertain
- 7b. Is there a potential for human exposure to the contaminants released from the facility over the next five to 10 years?
 - (X) Yes
 - () No
 - () Uncertain
- 8a. Are environmental receptors currently being exposed to contaminants released from the facility?
 - (X) Yes
 -) No
 - () Uncertain
- 8b. Is there a potential that environmental receptors could be exposed to the contaminants released from the facility over the next five to 10 years?
 - (X) Yes
 - () No
 - () Uncertain

Anticipated Final Corrective Measures

- 9. If already identified or planned, would final corrective measures be able to be implemented in time to adequately address any existing or short-term threat to human health and the environment?
 - (X) Yes
 - () No
 - () Uncertain

Additional explanatory notes: The interim measures may be considered final corrective measures.

- 10. Could a stabilization initiative at this facility reduce the present or nearterm (e.g., less than two years) risks to human health and the environment?
 - () Yes
 - () No
 - (X) Uncertain

Additional explanatory notes: The facility plans to finish stabilization within 4 years.

- 11. If a stabilization activity were not begun, would the threat to human health and the environment significantly increase before final corrective measures could be implemented?
 - () Yes
 - (X) No
 - () Uncertain

Additional explanatory notes: Facility has been at location for many years, therefore, the risk should not significantly increase

Technical Ability to Implement Stabilization Activities

12.	In	wha	t p	hase	does	the
	cont	tamin	nant	ex	ist	under
	amb:	ient	site	cond	litions	s?

- () Solid
- () Light non-aqueous phase liquids (LNAPLs)
- () Dense non-aqueous phase liquids (DNAPLs)
- () Dissolved in ground water or surface water
- () Gaseous
- (X) Other Petroleum products and wastes
- 13. Are one or more of the following major chemical groupings of concern at the facility?
 - (X) Volatile organic compounds (VOCs) and/or semi-volatiles
 - (X) Polynuclear aromatics (PAHs)
 - () Pesticides
 - () Polychlorinated biphenyls (PCBs) and/or dioxins
 - (X) Other organics
 - (X) Inorganics and metals
 - () Explosives
 - () Other
- 14. Are appropriate stabilization technologies available to prevent the further spread of contamination, based on contaminant characteristics and the facility's environmental setting? [See Attachment A for a listing of potential stabilization technologies.]
 - (X) Yes; indicate possible course of action.

Capping the SWMU

() No; Indicate why

s t a b i l i z a t i o n technologies are not appropriate; then go to Question 19.

- 15. Has the RFI, or another environmental investigation, provided the site characterization and waste release data needed to design and implement a stabilization activity?
 - () Yes
 - (X) No

If No, can these data be obtained faster than the data needed to implement the final corrective measures?

- () Yes
- (X) No

Timing and Other Procedural Issues Associated with Stabilization

- 16. Can stabilization activities be implemented more quickly than the final corrective measures?
 - () Yes
 - () No
 - (X) Uncertain

Additional explanatory notes: Stabilization may not be the final remedy and therefore more activities may be needed.

- 17. Can stabilization activities be incorporated into the final corrective measures at some point in the future?
 - (X) Yes
 - () No
 - () Uncertain

Conclusion

- 18. Is this facility an appropriate candidate for stabilization activities?
 - (X) Yes
 - () No, not feasible
 - () No, not required

Explain final decision, using additional sheets if necessary:

The facility plans to cap the SWMU and install ground water monitoring wells around the perimeter of the facility, to determine if contamination is migrating offsite.

CORRECTIVE ACTION STABILIZATION QUESTIONNAIRE

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Date: December 16, 1991

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Additional explanatory notes: The facility plans to finish stabilization within 4 years.

- 11. If a stabilization activity were not begun, would the threat to human health and the environment significantly increase before final corrective measures could be implemented?
 - () Yes
 - (X) No
 - () Uncertain

Additional explanatory notes: Facility has been at location for many years, therefore, the risk should not significantly increase

Technical Ability to Implement Stabilization Activities

- 12. In what phase does the contaminant exist under ambient site conditions?
 - () Solid
 - () Light non-aqueous phase liquids (LNAPLs)
 - () Dense non-aqueous phase liquids (DNAPLs)
 - () Dissolved in ground water or surface water
 - () Gaseous
 - (X) Other Petroleum products and wastes
- 13. Are one or more of the following major chemical groupings of concern at the facility?
 - (X) Volatile organic compounds (VOCs) and/or semi-volatiles
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- () Yes
- (X) No

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